

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
)	
Amendment of Part 101 of the Commission's Rules to)	WT Docket 10-153
Facilitate the Use of Microwave for Wireless Backhaul)	
and Other Uses and to Provide Additional Flexibility to)	
Broadcast Auxiliary Service and Operational Fixed)	
Microwave Licenses.)	

**REPLY COMMENTS OF WIRELESS STRATEGIES INC.
TO THE FURTHER NOTICE OF PROPOSED RULE MAKING**

I. Summary

- Wireless Strategies Inc ("WSI") supports the use of smaller antennas with their inherent advantages, but only under a regimen that does not cause interference greater than that of a Category A antenna.

- WSI recommends that Section 101.115(f) of the Rules should be revised to allow for the many benefits of smaller antennas without causing harmful interference to other users in the bands.

- WSI supports proposals that increase the flexibility of the rules so as to promote innovation, increase the effective use of spectrum and lower the costs of backhaul and access.

- WSI is against complicating the rules by introducing unnecessary specifications, especially mechanical specifications. As stated by the Commission in paragraph 70 of this proceeding: "The rule [101.115(b)] on its face does not mandate a specific size of antenna. Rather, it specifies certain technical parameters..."

I. Small Antennas

In our filing of October 4, 2011 WSI proposed changes to Section 101.115(f), including changing the phrase "...or operate its system with an EIRP reduced so as not to radiate, in the direction of the other licensee an EIRP in excess of that which would be radiated by a station using a Category A antenna operating with the maximum EIRP allowed by the rules" to "...or operate its system with an EIRP reduced so as not to radiate, in the direction of the other licensee an EIRP in excess of that which would be radiated by a station using a Category A antenna operating with the same ~~maximum~~ EIRP allowed by the rules." Comsearch, in their filing of October 4, 2011 suggested that the word "maximum" be deleted and replaced with "authorized." WSI agrees that "the authorized" may be a clearer than "the same" and has changed our proposal to reflect this minor change.

A. Proposed changes to Section 101.115(f) of the Rules (additions are underlined and deletions have a strike-through)

101.115(f)

"In the 5,925 – 6,425MHz, 6,525 – 6,875MHz and 10,700 – 11700MHz bands a fixed station may employ transmitting and receiving antennas not meeting performance standard ~~B~~ A in any area. If a Fixed Service or Fixed Satellite Service licensee or applicant makes a showing that it is likely to receive interference from such fixed station and that such interference would not exist if the fixed station used an antenna meeting a higher performance standard up to and including standard A, the fixed station licensee must modify its use. Specifically, the fixed station licensee must either substitute an antenna meeting a higher performance standard ~~A~~ or operate its system with an EIRP reduced so as not to radiate, in the direction of the other licensee, an EIRP in excess of that which would be radiated by a station using a Category A antenna operating with the authorized ~~maximum~~ EIRP ~~allowed by the rules~~. A licensee or prior applicant using an antenna that does not meet performance standard A may object to a prior coordination notice based on interference only if such interference would be predicted to exist if the licensee or prior applicant used an antenna meeting performance standard A."

Example:

New applicant licensing procedure (identical for a new applicant using a compliant or non-compliant antenna)

- The new applicant must perform an interference analysis to determine that the new station will not cause harmful interference to any existing station. If the new station would cause harmful interference and the new applicant cannot lower the main path EIRP, the new applicant would have to use an antenna capable of reducing the interference in the direction of the existing victim station or stations so as to not cause harmful interference. If the new applicant was using a basic parabolic dish antenna, the new applicant would have to go to either a higher performance design or to a larger antenna. Only when it has been determined that the new station will not cause harmful interference can the new applicant issue a Prior Coordination Notice and apply for a license.
- If the station is authorized and the station is using a "compliant" (CAT A) antenna, the station is protected from receiving harmful interference from any new applicant. However, if the station is authorized using a non-compliant antenna, the non-compliant station is subject to operation under 101.115(f).

As stated above, the operation of an authorized station using a non-compliant antenna is subject to operation under 101.115(f), which means:

If a new applicant using a compliant (Category A) antenna determines that it would not cause harmful interference to a station using a non-compliant antenna if the station used a compliant (Category A) antenna, then the station using the non-compliant antenna must either accept the interference or move to a higher performance antenna, up to an antenna that meets Category A. In addition, if a new applicant determines that it would receive harmful interference from a station using a non-compliant antenna, the non-compliant station must, per 101.115(f), "...either

substitute an antenna meeting a higher performance standard or operate its system with an EIRP reduced so as not to radiate, in the direction of the other licensee, an EIRP in excess of that which would be radiated by a station using a Category A antenna operating with the authorized EIRP."

The proposed changes would allow designers and users of FS microwave to minimize the cost and make it easier to comply with local zoning and homeowner association rules, and to ensure that the use of antennas not meeting Category A do not increase the potential for harmful interference, regardless of their physical or electrical characteristics.

This would also allay concerns that "...applicants proposing to use small antennas might boost transmit power to make-up for the difference in gain"¹ are unfounded, as to do so would only make it less likely that such an applicant would be able to prior coordinate with existing stations. Further, if the station did prior coordinate and was licensed, if the "boosted" EIRP from the licensed station using a non-compliant antenna ever caused harmful interference to a new applicant, the station using a non-compliant antenna with the "boosted" EIRP would be required, pursuant to the proposed Section 101.115(f) of the Rules, "...must either substitute an antenna meeting a higher performance standard or operate its system with an EIRP reduced so as not to radiate, in the direction of the other licensee, an EIRP in excess of that which would be radiated by a station using a Category A antenna operating with the authorized EIRP." Hence, boosting the EIRP would have considerable disadvantages for the applicant in that the likelihood of prior coordination would be significantly reduced, and there would be no long-term advantages. Also, there would be no impact regarding the blockage of new applicant paths.

II. Conclusions

The proposed changes would allow designers and users of FS microwave to minimize the cost and make it easier to comply with local zoning and homeowner association rules, and also ensure that the use of antennas not meeting Category A requirements do not increase the potential for harmful interference.

¹ Comsearch filing April 14, 2011 WT Docket 10-153

The benefits of such an antenna rule change would include:

- No increased potential to cause harmful interference
- No increased potential to block new applicant paths
- Lower monthly antenna site lease charges
- Lower cost to manufacture
- Easier and therefore less expensive to install
- Lower cost to maintain
- Makes them practical for installation at sites incapable of supporting large antennas
- Raise fewer aesthetic objections
- Permit easier compliance with local zoning and homeowner association rules
- Create employment opportunities in microwave R&D, manufacturing and construction
- Permit the users of the bands to efficiently match the antenna to the application

WSI therefore requests that the Commission act expeditiously to amend Rule 101.115(f) as proposed, so as to bring the above benefits to the wireless industry and the American consumer without further delay.

Respectfully submitted

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Chairman and CTO

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cc:

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